

# TO DO

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# REBUILDING INTERSTATES:

## A Basic To-Do List for Project Delivery

The Interstate Highway System (IHS) consists of approximately 50,000 miles of high capacity expressways, the trunk transportation network of the nation. There is widespread agreement that this system is in a deficient and worsening state of operation and maintenance, and after decades of neglect and disrepair, this system needs urgent rehabilitation, reconstruction, and capacity expansion. This inadequate performance has had numerous negative effects on the US economy; those effects multiply every year and influence the competitive performance of the nation. Action is past due.

**THE CURRENT FEDERAL HIGHWAY FUNDING MECHANISM...BRINGS IN AROUND \$37 BILLION ANNUALLY, NO MORE THAN 70% OF THE CURRENT EXPENDITURE LEVELS...**

The current federal highway funding mechanism, based on the federal gas tax, brings in around \$37 billion annually, no more than 70% of the current expenditure levels, which are around \$53 billion. After the expiration of SAFETEA-LU, the current method to offset this \$16 billion shortfall of gas tax collections is for Congress to periodically appropriate general tax fund dollars. In the current budgetary landscape of high

competition for scarce fiscal resources, and a monumental fiscal deficit, this mechanism is certainly unsustainable. An increase in the federal gas tax – a highly regressive fiscal concept – is off the political radar. There is no alternative other than new revenues.

The purpose of this article is to consider the possibility of converting some of the “free” interstate highway mileage to toll roads as one method to raise the funds needed to support the rehabilitation, reconstruction, and expansion of the network. A modest look at the entire interstate system will reveal that many miles of this system carry sufficient traffic to support tolling. We also assert that most people who travel these high volume interstate segments would be willing to pay a moderate amount of money to ensure that these highways work well.

In this article, we attempt to illustrate *what could be done*. What, for example, is the potential size of a nationwide effort to rebuild the interstate highways through tolling? When we use the term “nationwide,” we do not mean to suggest a federal or national government effort. We simply want to suggest that the geographic scope of the effort may include the entire country — from sea

to shining sea — and that this effort would be implemented by the states.

More than 50% of the IHS network has an Annual Average Daily Traffic (AADT) of around 40,000 or more, showing strong demand and high utility from its users. If we initially tolled just 20% of the IHS (10,000 miles), at an average toll rate of 15 cents per mile — a small fraction of the utility obtained by current users, especially trucks — we would obtain annual revenues of around \$22 billion nationwide, more than enough to offset the current highway shortfall. Implementing a second phase to toll another 20% of the IHS could boost the sufficiency of the current gas tax mechanism, allowing for investment on the otherwise untolled network of interstates and local roads.

For the sake of clarity, we are talking specifically about 10,000 miles of rural interstate highways. These are the trunk roads that carry a huge volume of truck freight traffic in the US. We are not focusing on urban interstates at the moment; that would be the subject of another article.

As an illustration, one way to organize this 10,000-mile endeavor could be to define some 100 self-sustainable



projects, each consisting of an average section of 100 miles of the IHS. (It could be 50 projects each consisting of 200 miles; the point is, this is simply an illustration). With the above AADTs and toll rates, each project could generate approximately \$220 million of average annual revenue, a reasonably sized business unit from an operations and management perspective. With annual operation and maintenance expenditures of \$70 million — a conservative 31.8% of the revenues — each project would generate an annual EBITDA of around \$150 million, and therefore the enterprise value of each project could be around \$1.5 billion. By definition, this number is equal to the net present value of the capital improvements that could be undertaken on these 100

miles, without recourse to government fiscal resources, or taxes.

In other words, the tolling of these initial 10,000 miles nationwide would create a new revenue stream that would be sufficient to back up to \$150 billion of bankable investments on the network, in today's dollars, within a reasonable time frame. This is the type of reconstruction, rehabilitation, and expansion concept that we need.

This concept of delivering self-sustainable toll projects on the existing IHS is the challenge and the opportunity for the nation to rebuild the backbone of the highway system and to make the existing funding system sustainable. In Eisenhower's day, it was clear that only a few miles of the IHS could be

self-sustainable using only toll funds. Today, more than half of the system can be self-sufficient with moderate toll rates and with no government fiscal resources. And it can generate enough new revenue to undertake the reconstruction of the tolled system.

There is plenty of money out there ready to be invested, and plenty of know-how and management capacity to undertake this endeavor. While most projects of this type will have to be public-private partnerships (P3s), there is ample room for under-leveraged, existing public authorities to carry

## PPP AUTHORITY IN VIRGINIA AND PUERTO RICO

Public-Private Partnerships, better known as PPPs, are contractual agreements between a government agency and a private entity to provide works or services required for an established period of time. There are models of PPPs that include one or more stages, including design, construction, operation, financing, and maintenance.

The **Puerto Rico Public-Private Partnerships Authority** promotes an ongoing collaboration between the public and private sector with the ultimate aim of offering a high quality of life to all Puerto Ricans. The collaboration between these two sectors is the key to promoting sustainable economic development and establishing Puerto Rico as a global competitor in the industry of goods and services.

For example, in June 2011, the Puerto Rico Public-Private Partnerships Authority along with the Puerto Rico Highways and Transportation Authority (PRHTA) completed the administrative concession of two toll roads, PR-22 and PR-5. The concession was awarded to a consortium composed of Goldman Sachs Infrastructure Partners and Abertis Infraestructuras. As part of the total investment of \$1,436 million, more than \$350 million will be for improvements and maintenance of the PR-22 and PR-5. As part of the contract specifications

out these types of projects. The North Texas Tollway Authority's acquisition of the rights to develop State Highway 121 as a toll road in the Dallas metro area is one example of this mechanism.

For this interstate highway reconstruction plan to succeed, someone has to

put these 100 projects in the pipeline first. This task belongs to the states, which are the owners of these highways. The Federal government can facilitate these state initiatives either by lifting the ban on tolling interstate highways or by expanding existing pilot programs, especially the Interstate

the private consortium cannot increase tolls until 2014. After 2014 any increase in tolls must be justified by the increase in the CPI.

The **Commonwealth of Virginia's Office of Transportation Public-Private Partnerships** is responsible for developing and implementing a statewide program for project delivery via the Public-Private Transportation Act of 1995. Leadership and program managers in the office bring a diverse range of technical expertise and professional backgrounds.

For example, Pocahontas 895 is an 8.8-mile cash and fully-electronic toll road with an elevated bridge crossing the James River. It is located southeast of Richmond, Va. and links Interstate 95 at Chippenham Parkway (Route 150) with Interstate 295 to create a southern bypass of the city. It is the only crossing of the James River for six miles in either direction. With its open road tolling, customers with E-ZPass™ may travel without stopping to pay tolls. The Commonwealth of Virginia, which planned and constructed Pocahontas 895, formed a public-private partnership with Transurban giving it a 99-year lease to manage and maintain the road. The road opened in 2002, and Transurban assumed management of Pocahontas 895 in June 2006 from VDOT.



System Reconstruction and Rehabilitation Pilot Program (ISRRPP). In addition, the federal government should expedite the process for approving state applications under such programs.

For the states, the task of defining one or several of these projects and putting them in the pipeline is not an easy one. However, common sense suggests a basic to-do list to advance these projects following the experience of those that have done this before.

**1. Legal. Make sure that you have the right legislation in place.**

Define procedures to include the views of all stakeholders in the project definition phase. Thereafter, ensure everything is an

executive branch matter. Someone may ask, “why not allow stakeholders, including the state legislature, to be involved in the project approval process?” The answer is simple. The legislature is there to create laws, not to manage projects. This concept of separation of powers dates back to Montesquieu and Jefferson and is more than 300 years old. Once you have the proper legislation to allow a state to engage in these types of endeavors, then implementation is the business of the executive branch.

**2. Legal. Create a P3 Agency to decide what projects ought to be undertaken as a traditional public procurement and as P3s.**

State DOTs are normally not

organized to procure this kind of project. Normally, the creation of a P3 agency or an office of P3 within the DOT can be very useful to define and list potential projects and to determine, with the existing comparative methods, if a given project has the merits to be undertaken as a P3 or not. See the sidebar on Virginia and Puerto Rico for examples of action-oriented legislative frameworks.

**3. Project. Prepare a sound capital investment definition for the project.**

Be realistic and austere. Display any rehabilitation and expansion components when they are needed, not before. Calculate the net present value of the capital investments. Forget about investments outside of the corridor. If the state obtains new revenues as a result of the new project (e.g. upfront payments, revenue sharing, profit sharing, or income taxes) it is best not to use these revenues too far away from the corridor.

**4. Project. Prepare a sound tolling schedule, coherent with your capital investment definition.**

Define toll rates per mile that make sense. As an illustration, 5-cents

**WHILE MOST PROJECTS OF THIS TYPE WILL HAVE TO BE P3S, THERE IS ALSO AMPLE ROOM FOR UNDER-LEVERAGED, EXISTING PUBLIC AUTHORITIES TO CARRY OUT THESE TYPES OF PROJECTS.**

per mile may be too low, while 25-cents per mile may be too high. Use the annual consumer price index (CPI) to drive the toll rate increase. Prepare sound location of tolling points, all as gantries (for all-electronic tolling), and preferably frequent. And create a sound policy for addressing local equity issues. Once again, we are talking about rural, not urban, interstate highways. This guideline is closely linked with guideline #3.

**5. Project. Prepare a business case and a stressed business case.**

Make sure that you develop a business model with all the variables,

and make sure that the project is still bankable in a stressed economic business case. You will probably need the rating agencies to qualify your project.

**6. Management. Make sure the state governor has a strong political commitment to the project.**

It is essential that the governor understands the philosophy and the basic concepts of the project from the outset. The governor must be willing to provide political cover to everybody else to minimize opposition to the project.

**7. Management. Put in place a qualified team including someone within state government who will have full authority for the project.**

The project will have to be managed by a small team of very well qualified, hard-working government officials that manage all the details, including a solid communications strategy able to manage

expectations. Gather a first-class team of external legal, technical, traffic and revenue, financial, accounting and fiscal, communications, and outreach advisors.

**8. Management. Commit to ambitious project timing, including the management of US DOT approval. Stay firm to it once you announce it.**

“Time is money” is truer than ever before. Time uncertainty is the worst enemy of the project. The marketplace will not participate in a project where the time from RFQ to closing is more than 18 months. Make sure you plan all the dates and details within this framework. Do not introduce any delay once you are in motion.

## CONCLUSION

With this to-do list, and many other inputs, each state will find its own way. The first project completed under this process will be the benchmark for the US for decades to come.

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— **JORDI GRAELLS** is the President of Abertis USA Corp. and the 2012 President of IBTTA. He may be reached at [jordi.graells@abertis.com](mailto:jordi.graells@abertis.com).

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